
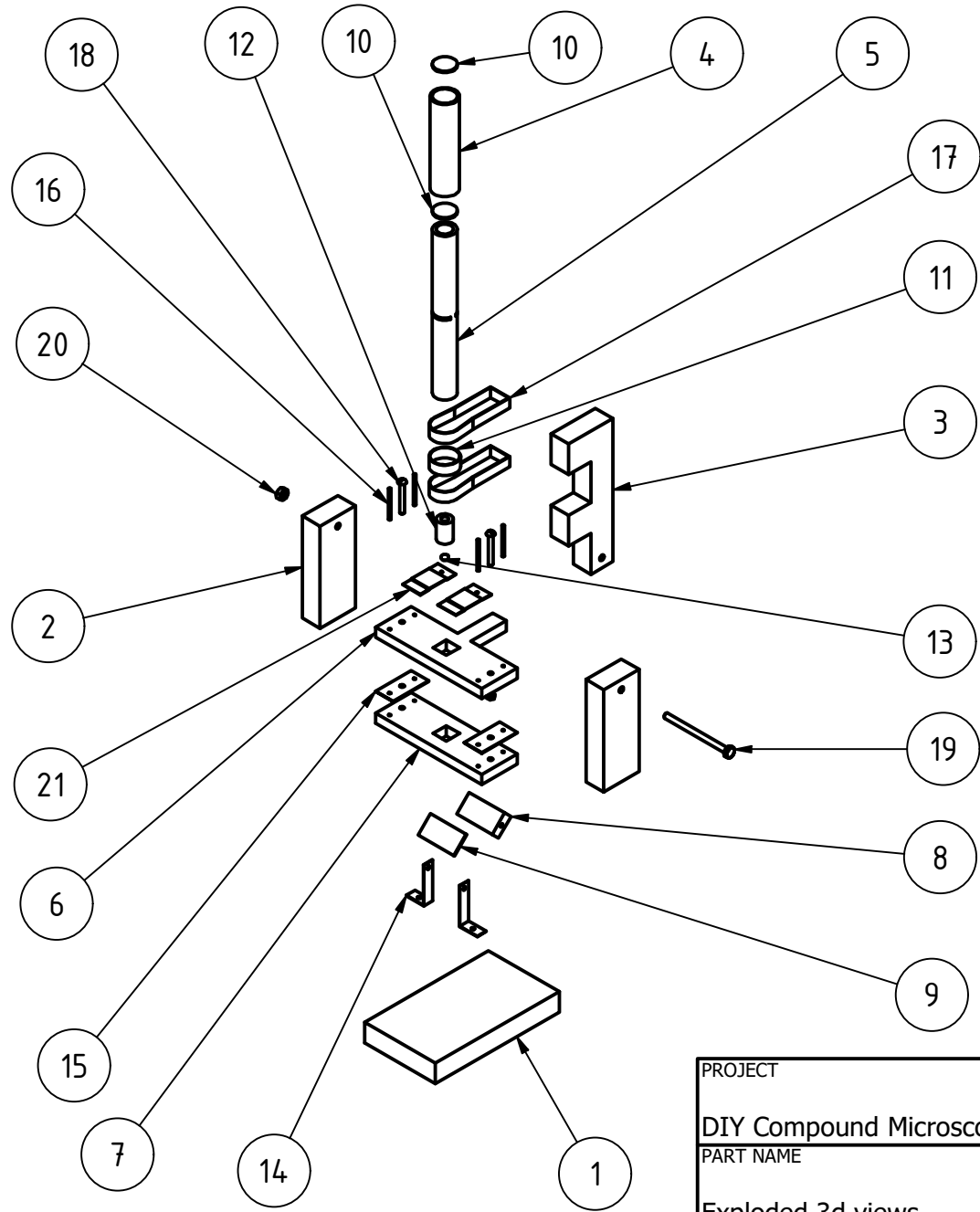



Note: All units in mm.

| | | | | |
|-------------------------|---|--------------|------------|----------|
| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| 3d views | DIY compound microscope.iam | | | A1 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | Assembly | | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:4 | 1 /12 |

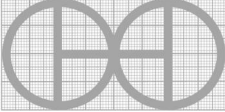


Note: All units in mm.

| | | | | |
|-------------------------|---|--------------|------------|----------|
| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Exploded 3d views | DIY compound microscope.ipn | | | A2 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | Assembly | | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:7 | 2 /12 |

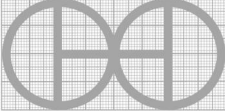
Parts list

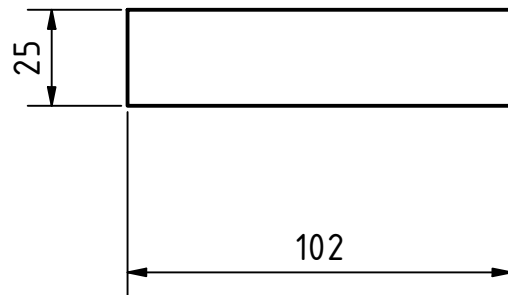
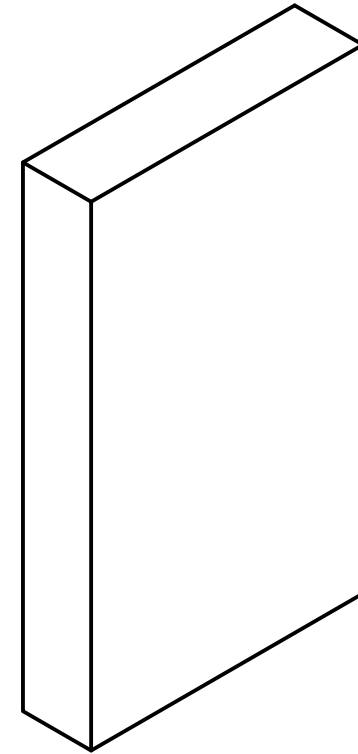
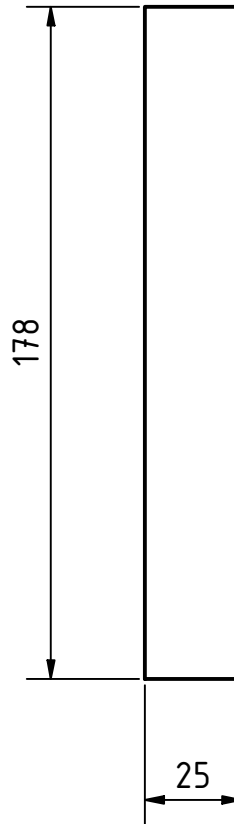
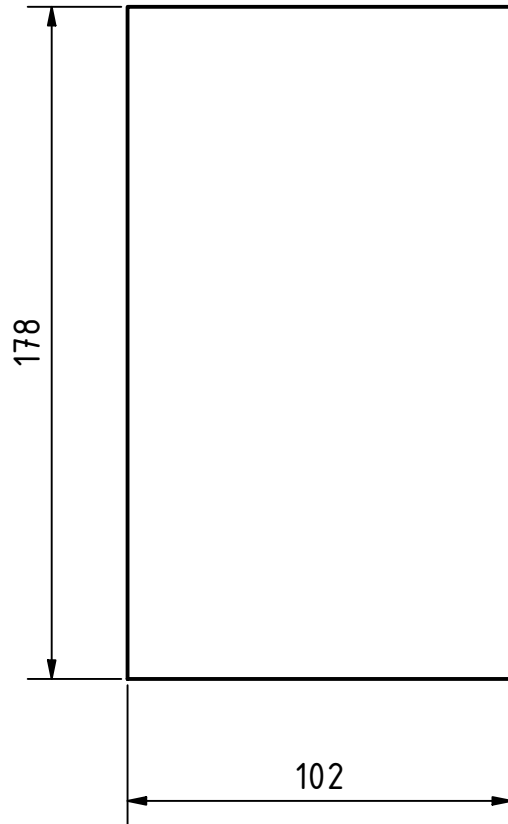
| POS | QTY | PART NAME | FILE NAME | PART TYPE | SPECIFICATIONS | SHEET |
|-----|-----|--------------------|-----------------------------|------------|---------------------------------------|-------|
| A1 | 1 | 3d views | DIY compound microscope.iam | | | 1 |
| A2 | 1 | Exploded 3d view | DIY compound microscope.ipn | | | 2 |
| B1 | 1 | Parts list | part list.csv | | | 3 |
| C1 | 1 | Technical notes | | | | 4 |
| 1 | 1 | Base board | base board.ipt | Production | Kiln dried wood | 5 |
| 2 | 2 | Vertical support | vertical support.ipt | Production | Kiln dried wood | 6 |
| 3 | 1 | Cylinder support | cylinder support.ipt | Production | Kiln dried wood | 7 |
| 4 | 1 | Cardboard cylinder | cardboard cylinder.ipt | Production | cardboard | 8 |
| 5 | 1 | PVC cylinder | PVC cylinder.ipt | Production | PVC plastic | 9 |
| 6 | 1 | Platform | platform.ipt | Production | Kiln dried wood | 10 |
| 7 | 1 | Platform B | platform B.ipt | Production | Kiln dried wood | 11 |
| 8 | 1 | Mirror support | mirror support.ipt | Production | Kiln dried wood | 12 |
| 9 | 1 | Mirror | mirror.ipt | Buy | mirror, 25.4 mm x 50.8 mm | |
| 10 | 2 | Ocular lens | lens.ipt | Buy | ocular lens 25.4 mm | |
| 11 | 1 | Insulating tape | insulating tape B.ipt | Buy | insulating tape | |
| 12 | 1 | Cork | cork.ipt | Buy | cork 25.4 mm | |
| 13 | 1 | Penlight bulb | bulb.ipt | Buy | penlight bulb 8-10 mm | |
| 14 | 2 | Strapping | strapping.ipt | Buy | steel, ASTM 1045 / DIN C45, 25.4 mm | |
| 15 | 2 | Strapping B | strapping B.ipt | Buy | steel, ASTM 1045 / DIN C45, 25.4 mm | |
| 16 | 10 | Nail 1 1/2" | 1_1_2 nail.ipt | Buy | steel, ASTM F-1667 | |
| 17 | 2 | Insulating tape B | insulating tape B.ipt | Buy | insulating tape | |
| 18 | 2 | Screw ANSI B18.6.3 | screws.ipt | Standard | ANSI B18.6.3 - 10 - 24 x 1 1/2 SR HMS | |
| 19 | 1 | Screw AS 2465 | screw B.ipt | Standard | AS 2465 - 1/4 UNC | |
| 20 | 1 | Nut B | nut B.ipt | Standard | AS 2465 - 1/4 UNC | |
| 21 | 2 | Strapping C | strapping C.ipt | Buy | steel, ASTM 1045 / DIN C45, 25.4 mm | |
| 22 | 2 | Nut | nut.ipt | Standard | UNI 5590 - A M5 | |

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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Parts list | part list.csv | | | B1 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | Parts list | | |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | | 3 / 12 |

TECHNICAL NOTES

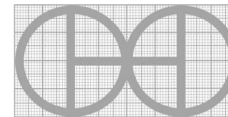
| NOTES | CONTENT |
|-------------------------------------|--|
| GENERAL NOTES | |
| Distance between the objective lens | <p>The distance between the objective lens and the first lens of the eyepiece is a fixed and invariable distance whose length can be obtained by the formula:</p> $D = S + F$ <p>Where S is defined by:</p> $1/S = -1/(f+1f) + 1/f \quad \text{or} \quad S = 11 f$ <p>where f is the focal length of the objective lens and F is the focal length of the first lens of the eyepiece.</p> |

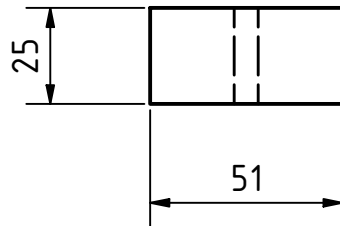
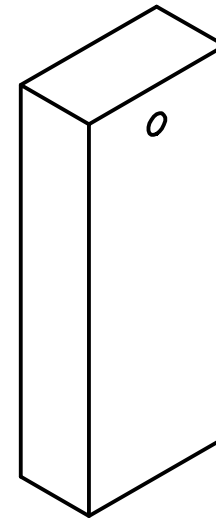
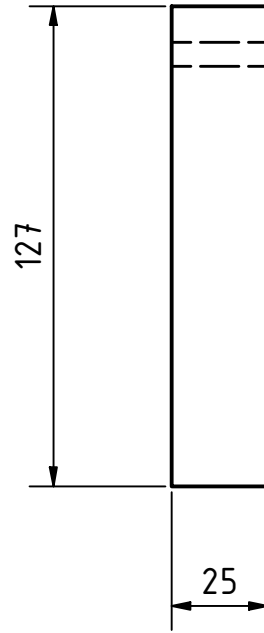
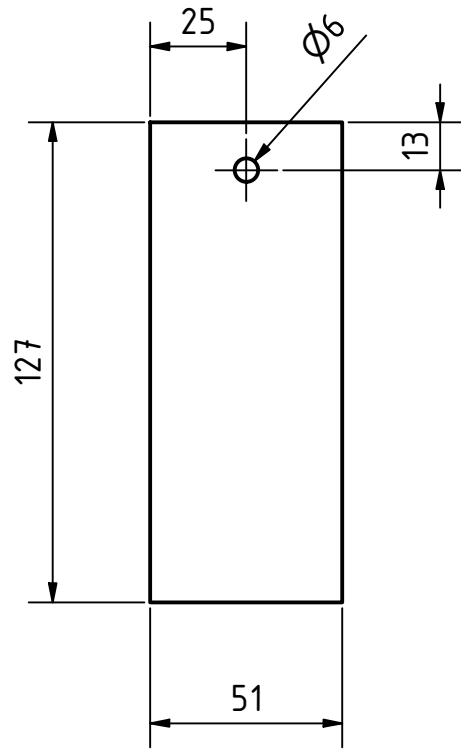
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|--------------------------------------|--|------------------------------|--------------------|----------------|
| PROJECT DIY Compound Microscope | CREATED BY E. Ceballos | APPROVED BY A. Morillo | DATE 11/06/2021 | VERSION 1.0 |
| PART NAME Technical notes | FILE NAME | | | POS C1 |
| DEVELOPED BY AMERICAN PEACE CORPS | REDESIGNED BY  OHO e.V. | DOC. TYPE Technical notes | MATERIAL | QUANTITY |
| | | LICENCE CC-BY-SA 4.0 | SCALE | SHEET 4 /12 |



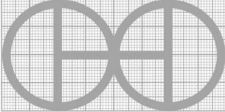
Note: All units in mm.

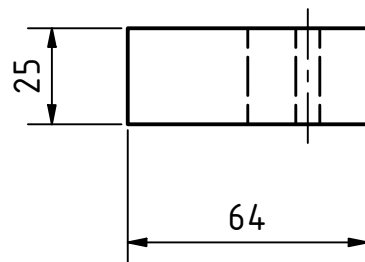
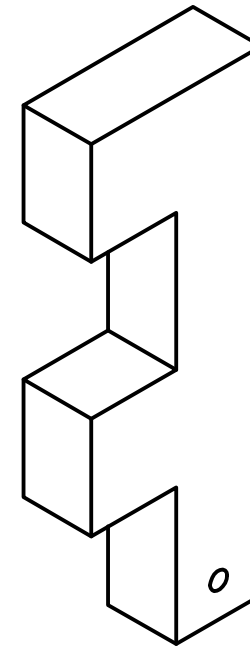
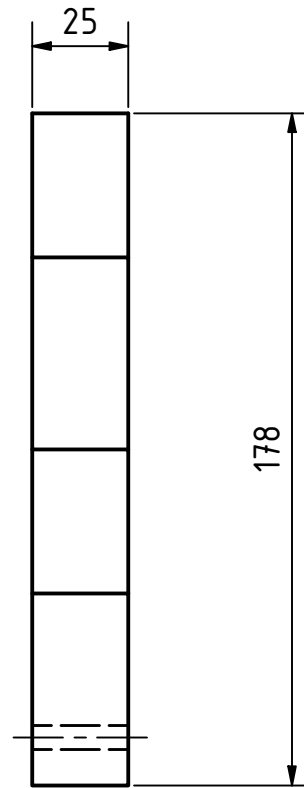
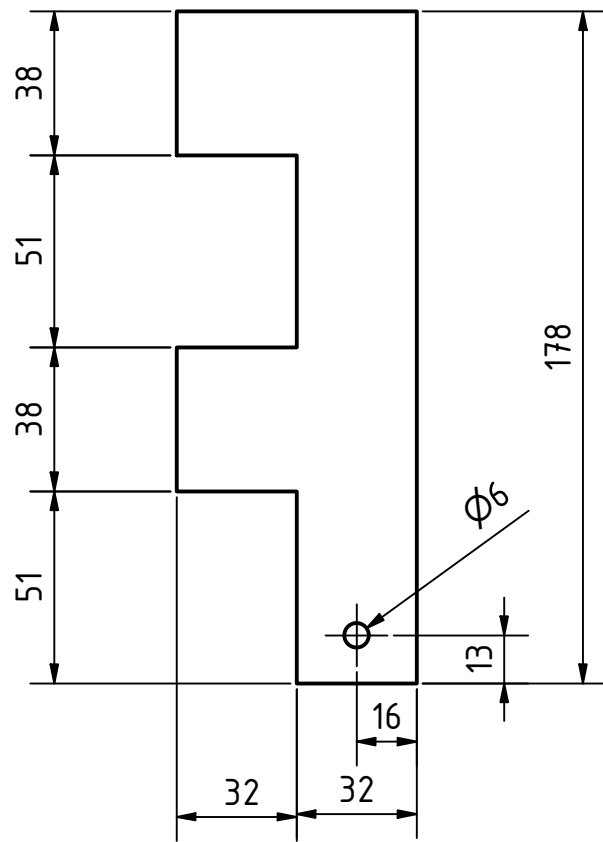
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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | POS | | |
| Base board | base board.ipt | 1.0 | | |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| AMERICAN PEACE CORPS | OHO e.V. | Assembly | Kiln dried wood | 1 |
| | | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:2 | 5 /12 |






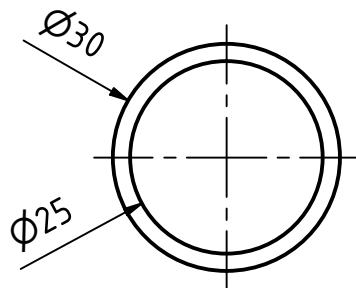
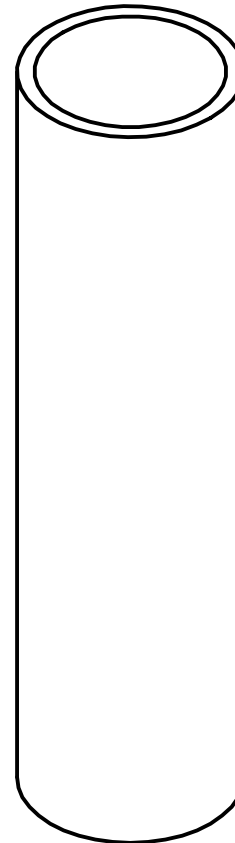
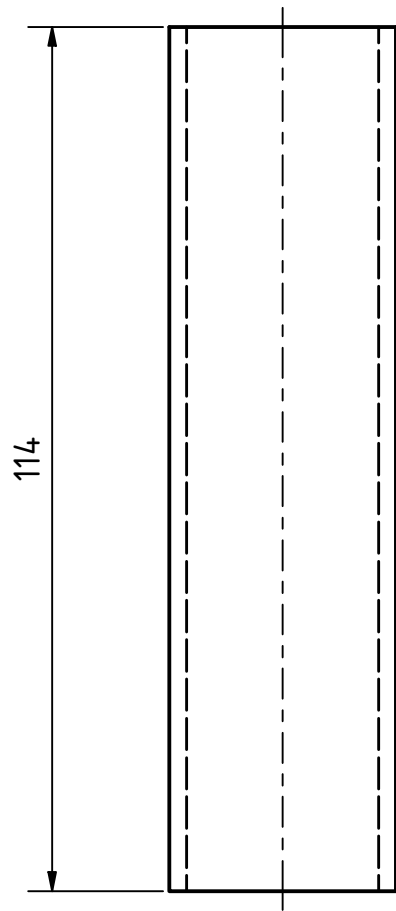
Note: All units in mm.

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|-------------------------|---|--------------|-----------------|----------|
| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Vertical support | vertical support.ipt | | | 2 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | Kiln dried wood | 2 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:2 | 6 /12 |




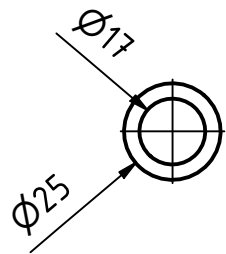
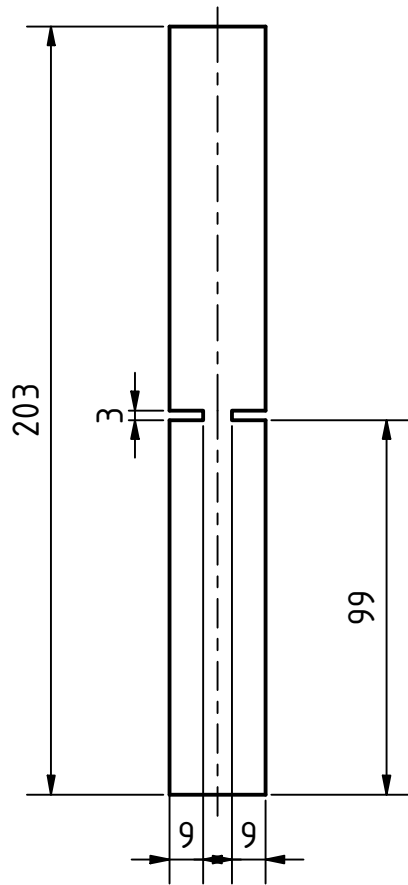
Note: all units in mm

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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Cylinder support | cylinder support.ipt | | | 3 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | Kiln dried wood | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:2 | 7 /12 |

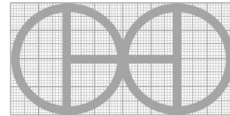


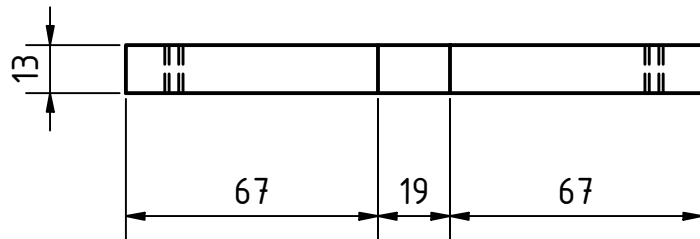
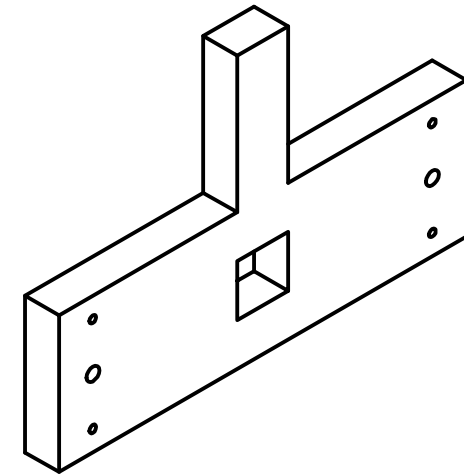
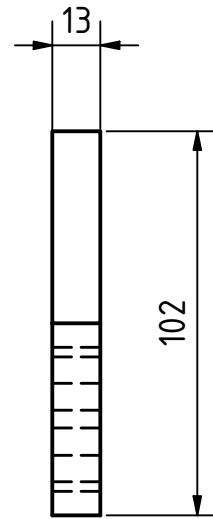
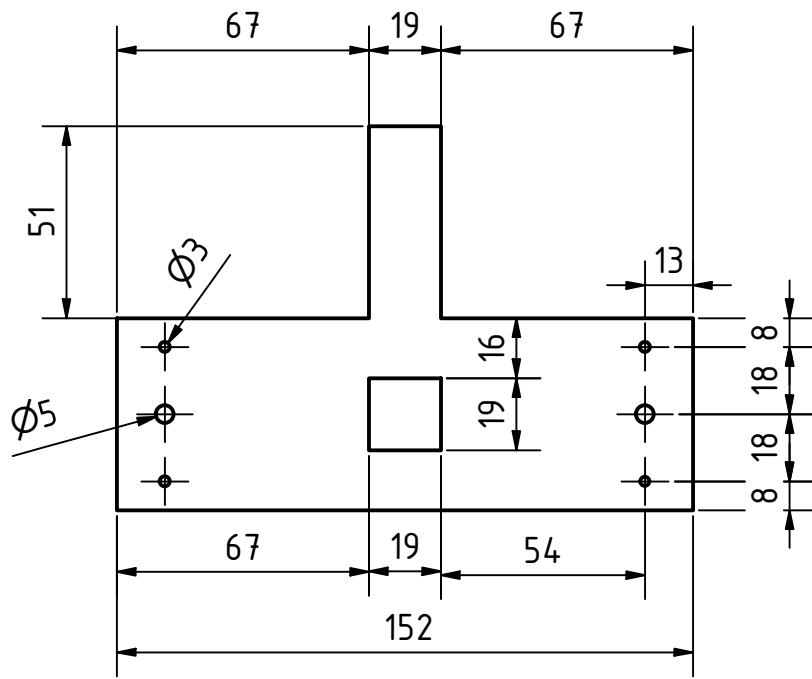
Note: all units in mm

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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Cardboard cylinder | cardboard cylinder.ipt | | | 4 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | cardboard | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:1 | 8 /12 |




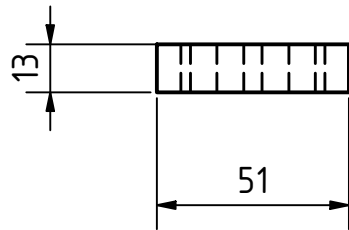
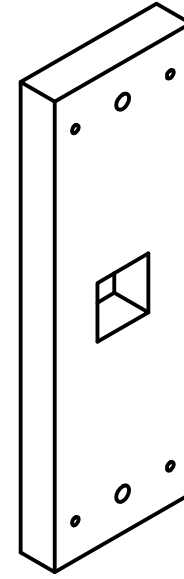
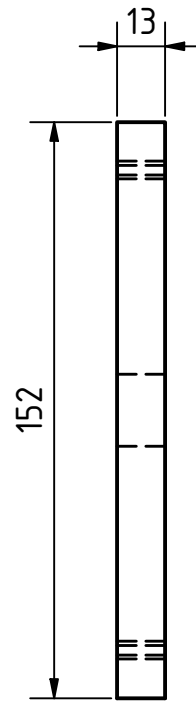
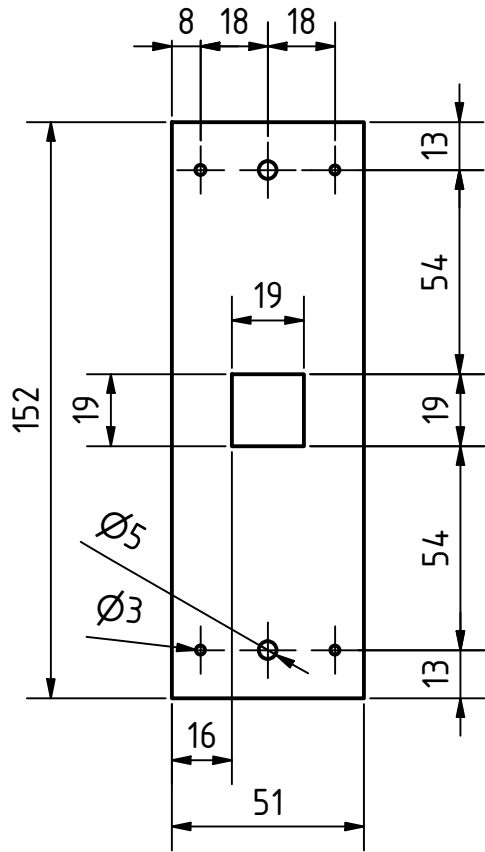
Note: all units in mm

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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| PVC cylinder | PVC cylinder.ipt | | | 5 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | PVC plastic | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:2 | 9 /12 |

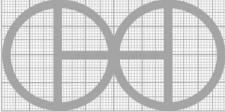


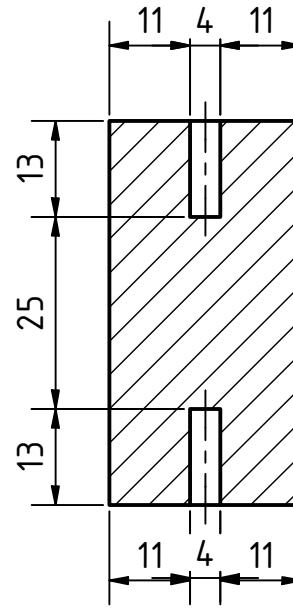
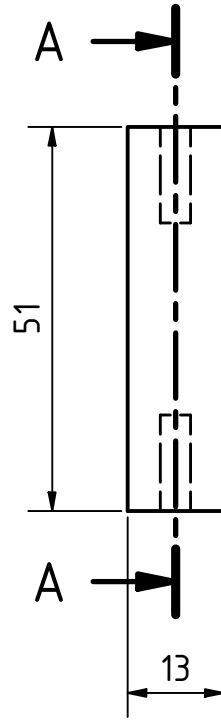
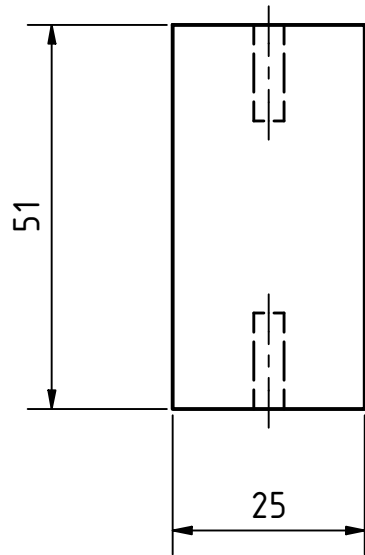
Note: all units in mm

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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Platform | platform.ipt | | | 6 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | Kiln dried wood | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:2 | 10 /12 |

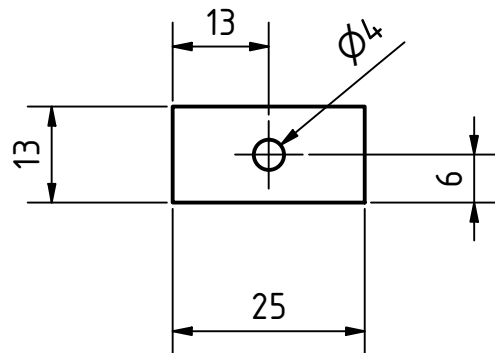
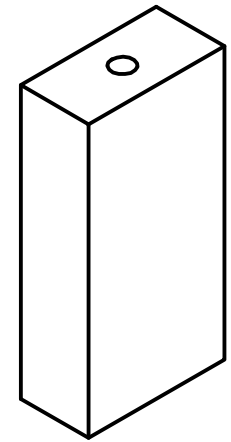


Note: all units in mm


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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Platform B | platform B.ipt | | | 7 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | Kiln dried wood | 1 |
| | | LICENCE | SCALE | SHEET |
| AMERICAN PEACE CORPS | OHO e.V. | CC-BY-SA 4.0 | 1:2 | 11 /12 |



A-A (1 : 1)



Note: all units in mm

| | | | | |
|-------------------------|---|--------------|-----------------|----------|
| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| DIY Compound Microscope | E. Ceballos | A. Morillo | 11/06/2021 | 1.0 |
| PART NAME | FILE NAME | | | POS |
| Mirror support | mirror support.ipt | | | 8 |
| DEVELOPED BY | REDESIGNED BY | DOC. TYPE | MATERIAL | QUANTITY |
| |  | PART | Kiln dried wood | 1 |
| AMERICAN PEACE CORPS | OHO e.V. | LICENCE | SCALE | SHEET |
| | | CC-BY-SA 4.0 | 1:1 | 12 /12 |